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## Open Education as a threshold concept in Teacher Education: a theoretical framework for further research

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# **Open Education as a Threshold Concept in Teacher Education:**

**a theoretical framework for further research**

**#oer18thresholds**



***This session grew from an original session proposal by:***

**Gemma Tur**, University of the Balearic Islands  
**Victoria I. Marín**, University of Oldenburg

***Following an open call for participation the group expanded to:***

**Leo Havemann**, Birkbeck, University of London/The Open University

**Jeffrey Keefer**, New York University

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**Helen Crump**, The Open University

**Nick Baker**, University of Windsor

**Mari Cruz García Vallejo**, Independent





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## ***Part 1*** ***A Video Introduction***

*(Gemma and Victoria)*

[https://drive.google.com/open?id=1jwYwQ9GnYQ0QEjU927fyTAViCWXk\\_IRt](https://drive.google.com/open?id=1jwYwQ9GnYQ0QEjU927fyTAViCWXk_IRt)





# #oer18thresholds

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A world map is centered in the background, rendered in shades of blue and purple. Overlaid on the map is a complex network of light blue lines and dots, resembling a global communication or data network. The map shows the continents of North America, South America, Europe, Africa, Asia, and Australia.

## ***Part 2: Open as Troublesome and Discussion***

*(Slides by Dawn and Leo, Presented by Leo and Helen)*



## The original criteria

***transformative:*** occasioning a significant shift in the perception of a subject, the construction of subjectivity and personal identity

***irreversible:*** unlikely to be forgotten, or only able to be unlearned with difficulty

***integrative:*** making connections between ideas within a subject and resulting in an understanding of the relationships between ideas and practices in a field

***bounded:*** constituting a demarcation between disciplinary areas, which serves to delineate members of one academic community from another

***troublesome:*** appearing counter-intuitive, intellectually absurd or 'alien' when first encountered

(Meyer & Land, 2006b; Perkins, 1999, 2006)



## Subsequent criteria

- reconstitutive***: involving a shift in learner subjectivity and a transfiguration of self;
- discursive***: incorporating an extended use of natural, symbolic and artificial language characteristic of particular disciplinary discourses and thinking processes; and
- liminal***: likening the internalisation of a threshold concept to a journey or rite of passage (Baillie et al., 2013; Barradell, 2013; Meyer, 2012; Quinlan et al., 2013).



## Rites de Passage

The genesis of threshold concept theory is in van Gennep (1960) and Turner's (1969, 1970) anthropological research on initiation rites and life transitions.

- Adolescent >>> Adult
- Student >>> Professional
- PhD candidate >>> Academic researcher
- Traditional educator >>> Open educator

How does the initiation from *thinking like* an open educator, to *thinking as* an open educator take place?



Subject	Threshold Concepts
Accountancy	cash, depreciation, profit, reconciliation
Art therapy	professional identity, reflexivity, taboo
Biology	complexity, conceptual change, dynamics, energy, equilibrium, evolution, homeostasis, hypothesis creation, osmosis, process and abstraction, probability, proportional reasoning, randomness and scales, variation
Business and commerce	politics as power
Climate change	uncertainty
Computing	code reuse, complexity, data abstraction, design patterns memory/pointers, modularity, object-oriented programming, state, recursion
Economics	discretionary fiscal policy, economic modelling, efficiency, elasticity, equilibrium, incentives, interaction between markets, margin, opportunity cost, welfare
Electrical engineering	dynamic resistance, feedback, holistic current flow, Thévenin's theorem
Engineering	Bode plots, logical thinking, map sense, professionalism, response, social justice, transient critical flow, transmission lines
Geography and geoscience	data modelling, geologic/deep time, interoperability, map scale
Humanities	subjective interpretation
Information literacy	authority, commodification of information, disciplinarily, format as process, metadata
Leadership	moral courage, risk, service, shared leadership, structural leadership, 'creating leaders'
Linguistics	rank scale



## Troublesome knowledge

The notion of troublesome knowledge is informed by Perkins' (1999, 2006) pragmatic constructivism.

- *Inert*: seldom applied, e.g. passive vocabulary
- *Ritual*: routinely (but often uncritically) executed to achieve a result
- *Conceptually difficult*: conflicting with intuitive understandings
- *Foreign*: challenging existing beliefs and worldviews.
- *Tacit*: reflecting unconscious beliefs or peripheral awareness



## Discussion!

**Threshold concepts are said to be ‘troublesome knowledge’ - in what sense might teachers experience open education as troublesome?**

***Any other thoughts arising from the idea of open education as a threshold concept?***

***Please discuss and tweet your responses with the hashtag!***



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